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Best Investments for Physical Activity in Dumfries and Galloway



THE UNIVERSITY
of EDINBURGH

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Executive Summary

Lack of physical activity is a major challenge in the UK, and places substantial burden on the healthcare system. Conversely, participating in physical activity is known to promote physical, mental, and social well-being.

This report was commissioned to highlight what is working to promote physical activity in Dumfries and Galloway. The report had three primary objectives:

- To use existing evaluation findings to describe the spread and parity of physical activity promotion by geographical region, and age group and gender catered for;
- To use existing evaluation findings to highlight the existing approaches in Dumfries and Galloway that are providing best return on investment;
- To make recommendations for enhancing existing work, and evaluation and monitoring systems.

In terms of spread and parity, physical activity promotion is taking place in 52 projects across all 4 localities in Dumfries and Galloway. From the returned data Dumfries and Galloway had achieved 700,000 unique engagements (attendances, sessions, etc.) with physical activity projects, at a total cost of £2.1 million. There was more evidence of locality focussed work from Annandale and Eskdale and Nithsdale than Stewartry or Wigtownshire. It is not clear if this is a result of data collection or is the reality on the ground, but our recommendation for enhanced evaluation networks and infrastructure will allow this to be assessed moving forward. The number of projects across the whole region show that all 4 localities are still well provided for.

There is a high level of provision for children (5-18 years) and adults (19-64 years) and both males and females are catered for across Dumfries and Galloway. However, the available data suggest a low number of projects for early years (0-5) and for older adults (65+ years). **We recommend a full audit of provision and strategy in these key age groups.**

The report found that Dumfries and Galloway had physical activity promotion across each of the 8 Project Types (School and Education; Transport; Urban design, Infrastructure and Natural Environment; Health and Social Care; Mass Media; Sport; Leisure; and Workplace). After consideration of cost, reach, attendance, and lifetime of project, examples of projects that appear to offering a good return on investment were identified and are highlighted in this report.

We make a series of recommendations for future provision, and enhanced evaluation that will allow both insight in project improvement, and monitoring of success at project and overall strategy level.

An important learning point was that directly comparing return on investment between varied projects is not necessarily the right approach. Rather than “what project is best” the question should be “what series of projects will contribute” to increasing physical activity. This helps frame the strategy against physical inactivity as a multi-pronged, multi-sectoral approach. As such this report aims to highlight successes, and areas where investment in more of the same, or upscaling existing work will likely help contribute. It should not be used to justify one approach over another – the more projects and approaches, in more sectors, the more Dumfries and Galloway will be combating low inactivity and promoting good health and well-being.

Introduction and Background

There is now substantial evidence showing that regular physical activity can impact positively on health, reducing risk of diseases such as breast and colon cancer, obesity, type 2 diabetes, and dementia. It also plays an important role in the enhancement of mental health, physical fitness, and in the maintenance of functional independence in to old age¹.

Physical activity includes all forms of activity, such as everyday walking or cycling to get from A to B, active play, work-related activity, active recreation (such as working out in a gym), dancing, gardening or playing active games, as well as organised and competitive sport.

Physical inactivity - the failure to achieve the recommended physical activity levels, is widely accepted as a major public health problem, described in the Lancet in 2012 as being at a 'pandemic' level². Current UK guidelines set out by the Chief Medical Officers (CMOs) of the home nations advise 150 minutes of moderate intensity activity, or 75 minutes of vigorous activity each week for adults, along with muscle strengthening activities on two days each week, and minimising sitting time¹. For older adults, it is recommended that PA that improves balance and coordination should be also completed each week. Children under 5 years should be active for 3 hours each day, and that those between 5-18 years should be active for one hour a day of at least moderate intensity. These groups are also recommended to minimise their sitting time¹.

In Dumfries and Galloway, the Physical Activity Alliance was established in 2013.

The purpose of this alliance was to provide strategic leadership and coordination of activities to increase levels of physical activity, and reduce levels of inactivity. In 2015, the Physical Activity Alliance agreed a vision for Dumfries and Galloway to become "the most active place in Scotland by 2024".

Despite the many health benefits of being physically active, the prevalence of inactivity remains high across each life-course stage. Less than a quarter of Dumfries and Galloway school pupils (22%)

meet CMO recommendations³. Girls (17%) were significantly less active than boys (26%)³. By comparison, 59% of Dumfries and Galloway adults achieve CMO physical activity recommendations, the lowest proportion in Scotland although not significantly different from the national average (63%)⁴.

Recognising this, Dumfries and Galloway organised a Senior Leaders event on increasing and embedding opportunities for PA around Health and Social Care Integration in 2016⁵. Senior leaders were asked if they knew how much Dumfries and Galloway spent on PA, to discuss how effective current approaches were, what could be scaled up, and what offered the best return. Senior leaders requested information on how much Dumfries and Galloway spent on PA projects and whether or not these were deemed cost effective. Evidence on which current interventions deliver the greatest return on investment was requested plus information on which approaches had potential for scalability.

1 Start Active, Active Stay. "A report on physical activity for health from the four home countries' Chief Medical Officers." The Department of Health (2011). https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216370/dh_128210.pdf

2 Kohl, H. W. Craig, C. L., Lambert, E. V., Inoue, S., Alkandari, J. R., Leetongin, G., & Kahlmeier, S. (2012). Physical activity 5: "The pandemic of physical inactivity: Global action for public health". The Lancet, 380(9838), 294-305.

3 DG Health & Wellbeing. (2016). "Dumfries & Galloway School Physical Activity and Wellbeing Survey 2015", NHS Dumfries and Galloway https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216370/dh_128210.pdf

4 Scottish Government. (2014). "Scottish Health Survey: Health Board Results, 2012/2013/2014" <http://www.gov.scot/Publications/2016/03/6320>

5 Whitelaw, S., Topping, C., McCoy, M., & Turpie, L. (2017). "Promoting integration within the public health domain of physical activity promotion Insights from a UK case study". Journal of Integrated Care, (25), 174-185

6 Dumfries and Galloway Integration Joint Board. (2015). "Health and Social Care Strategic Plan 2016-2019"

Senior leaders recognised that PA requires being integral to the preventative health and social care agenda. The Local Health and Social Care (HSCI) Integration Strategic Plan states that “the scale of the challenge means that delivering services in the way that we do currently is not a realistic option going forward as this will not meet the needs of our population”⁶. The ability to demonstrate the impact of cost effective PA approaches on health and wellbeing outcomes will strengthen strategic policy and practice within the culture of Health and Social Care. This report represents follow up and the next step in these activities.

Evaluation and monitoring is recognised as a critical component of physical activity promotion⁷. As part of the ongoing efforts to promote physical activity in Dumfries and Galloway, evaluation has become a core requirement for projects and programmes. Indeed, the region is recognised as something of a leader in terms of evaluation of physical activity promotion. However, there is still some inconsistency in evaluating the current impact and outcomes of PA programmes across Dumfries and Galloway. There is an ongoing need to provide evidence of effectiveness as part of an evidenced based approach, while justifying and protecting services within a challenging economic landscape.

This current project was commissioned to synthesise and appraise the available evaluation data and to make recommendations for what activities appear to be providing the best return on investment in Dumfries and Galloway. This will allow the identification of “priority activities to promote physical activity” over the next 2 years.



⁷ Bauman, A., & Nutbeam, D. (2013). *Evaluation in a nutshell: a practical guide to the evaluation of health promotion programs*. McGraw Hill.

The Dumfries and Galloway Best Investment Method and Approach

The Health and Wellbeing Team in Dumfries and Galloway commissioned the Physical Activity for Health Research Centre (PAHRC) based in the University of Edinburgh to co-design and co-implement this appraisal of evaluation evidence. A data collection template was co-created, the Health and Wellbeing Team coordinated the collation of project data, and the PAHRC Team conducted the synthesis and appraisal.

The method and approach were designed to meet the three primary objectives:

1. To use existing evaluation findings to describe the spread and parity of physical activity promotion by geographical region, and age group and gender catered for;
2. To use existing evaluation findings to highlight the existing approaches in Dumfries and Galloway that are providing best return on investment;
3. To make recommendations for enhancing existing work, and evaluation and monitoring systems.

Objective 1 was met through descriptive analysis and reporting of projects by key demographics (location, age group, and gender).

Objective 2 was perhaps the most challenging. We used a pragmatic approach to determine which projects were offering the greatest return on investment in Dumfries and Galloway. We considered the cost weighted against (where available) the 3 critical aspects of (i) number of unique participants or users reached; (ii) number of repeat attendances; and (iii) duration of project or likelihood of ongoing impact. This was used to generate an informal subjective ranking within each of the 8 project types.

Given the extremely varied nature of approaches, it is important to avoid comparisons between project types. For example an awareness project using online materials will have a very different financial model to building urban infrastructure such as leisure facilities. Our approach was designed to highlight examples of success in multiple areas, rather than state that Project A was better or worse than Project B. The projects named are not necessarily the best, but based on the available data are examples of success.

An additional consideration is when a project utilises existing infrastructure such as a school, sports club, or leisure facility. On the surface these will usually appear more cost-effective than approaches that start from scratch, but will be limited to areas where these facilities exist.

Finally, the legacy or ongoing impact of a project was considered. The construction of a cycle path might be less cost-effective than “event days” over 6 months, but are far more likely to have an ongoing impact over many years once they are in place.

Objective 3 was met through highlighting successes and gaps and suggesting practical steps that could be taken to build on successes or adapt to enhance PA promotion efforts.



Physical Activity Promotion in Dumfries and Galloway

Physical Activity Promotion by geographical location

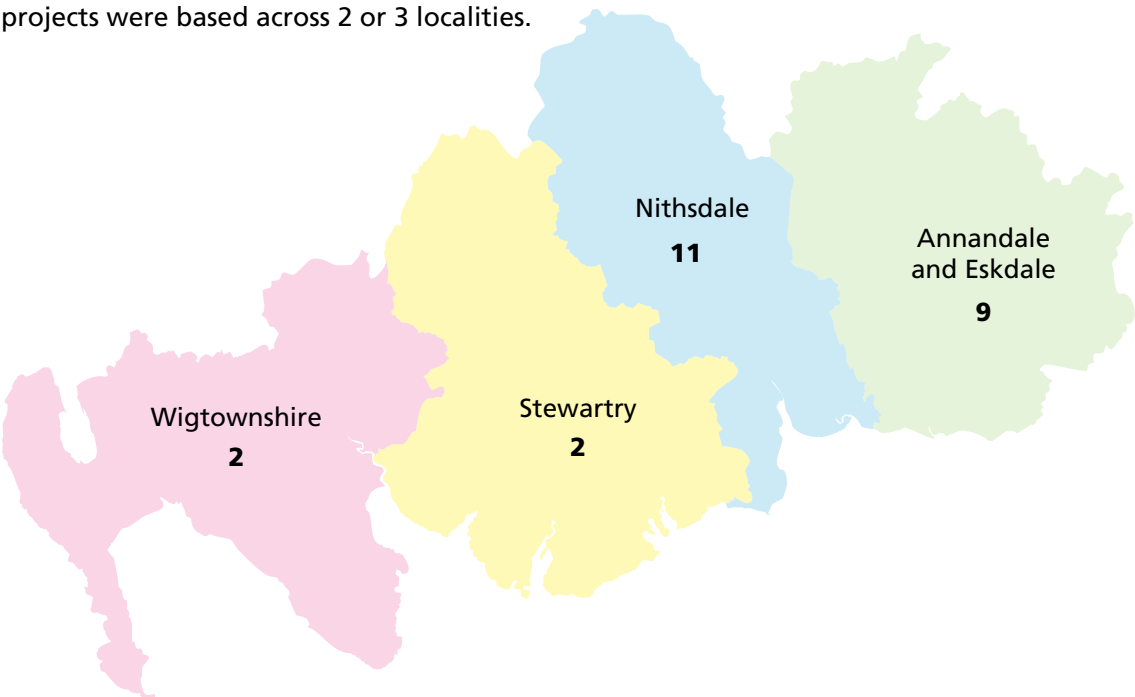
Dumfries and Galloway Physical Activity Alliance led the co-ordination of the evaluation reports for n=52 physical activity promotion projects or strategies for the period 2015-2016. From the returned data Dumfries and Galloway had achieved 700,000 unique engagements (attendances, sessions, etc.) with physical activity projects, at a total cost of £2.1 million. These figures provide an indication of the scale of physical activity projects included in this report, but should not be considered representative of the total physical activity regional landscape.

Geographically these 52 projects covered the 4 localities of Dumfries and Galloway (Annandale and Eskdale, Nithsdale, Stewartry and Wigtownshire). N=22 (42%) of these projects were acting across the entire Dumfries and Galloway area suggesting good geographical spread across Dumfries and Galloway. N=5 of the projects were based across 2 or 3 localities.

However, the most common project type was “regional” with n=25 projects focussed in 1 of the 4 Dumfries and Galloway localities. Among these projects the majority (n=20 representing almost 80% of the regional projects) were located in Annandale and Eskdale (n=9) or Nithsdale (n=11). These results are shown in table 1. This finding likely reflects where the Health and Wellbeing Specialist had the most established network of contacts to ensure data collection.

Table 1. Geographical spread of PA promotion in Dumfries and Galloway

Region	Number of projects
Annandale and Eskdale	9
Nithsdale	11
Stewartry	3
Wigtownshire	2
2-3 Localities	5
All Localities	22



Recommendation 1: establish a project monitoring system across the entire Dumfries and Galloway Region, to better understand the geographical spread.

Physical Activity Promotions

Project Name	Lead Agency	Purpose	Project Type	Age	Location
Active Dalbeattie - Core Path 20 Project	Multi-Agency Community Partnership	Multi-agency community partnership infrastructure project to connect and increase community usage of Dalbeattie Forrest (Core Path 20) by local residents and visitors to the area	Urban design and natural environment	Intergenerational	Stewartry
Active Schools	sportscotland / Dumfries and Galloway Council	"Active Schools provides additional and higher quality opportunities to take part in sport and physical activity before school, during lunchtime and after school, and to develop effective pathways between schools and sports clubs in the local community".	School and Education	5 to 18	Regional
Active Travel Maps	Dumfries and Galloway Council	Design and circulation of maps promoting and facilitating active and sustainable travel in all towns in Dumfries and Galloway that have a town bus service	Transport	Intergenerational	Regional
Active Travel Strategy	Dumfries and Galloway Council	A Strategy to increase walking and cycling throughout the region with a focus on functional trips	Transport	Intergenerational	Regional
Annan Swimming Pool	Dumfries and Galloway Council	Local Authority operated Swimming Pool	Leisure	Intergenerational	Annandale & Eskdale
Babes in the Woods	Bump Baby and Beyond	"Free outdoor play sessions for under 5's and their parents/carers in and around Dumfries. Child led, fun and muddy"	Leisure	Under 5 (and families)	Combination of 1-3 localities
Be Active Upper Nithsdale	Dumfries and Galloway Council	A pilot programme to determine whether free access to a cross-sector physical activity programme would increase levels of physical activity and improve wellbeing at community level. The programme was open to all older adults (50 plus) and carers (16 plus) living in the DG4 postcode area.	Leisure	65+	Nithsdale
Beat the Street Annan	Intelligent Health	A community-wide intervention that delivers health, wellbeing and active travel outcomes by encouraging people to be more physically active within their local environment. The programme involves residents tapping a card on sensors called Beat Boxes placed approximately half a mile apart around their town in a game which nudges the whole community to moving more.	Urban design and natural environment	Intergenerational	Annandale & Eskdale
Beat the Street Dalbeattie	Intelligent Health		Urban design and natural environment	Intergenerational	Combination of 1-3 localities
Big Team Challenge	Big Team Challenge	A virtual workplace challenge system encouraging individuals/teams to walk more as part of their everyday routine	Workplace	19 to 64	Regional
BHC Machars	Building Health Communities (BHC)	Building Healthy Communities i is a region wide programme based on the 'Healthy Living Centre' concept and is a partnership of public, community and voluntary organisations. The programme is designed to improve the health and wellbeing and quality of life for all individuals, particularly those who are encountering difficult circumstances and personal issues.	Leisure	Intergenerational	Wigtownshire
BHC Tai Chi for Health and Wellbeing	Building Health Communities (BHC)			45+	Nithsdale
BHC Machars (West Wigtownshire)	Building Health Communities (BHC)			40+	Wigtownshire
Bikeability Level 1 (aimed at primary 5)	Cycling Scotland	Bikeability Scotland is the modern day cycling proficiency programme designed to give children the skills and confidence they need to cycle safely on today's roads.	School and Education	5 to 18	Regional
Bikeability level 2 (primary 6-7)	Cycling Scotland		School and Education	5 to 18	Regional
Chair Based Exercise	NHS Dumfries and Galloway	A targeted programme supporting people whom other forms of physical activity are not suitable; the elderly, people of limited mobility, those with breathing problems, those who are overweight and those who may be socially isolated.	Leisure	19+	Nithsdale
Challenge to Change Programme	Support and Mind	A region wide programme providing subsidised or free physical activity programmes for individuals diagnosed with any disorder under the mental health act. The programme aims to create regular patterns of physical activity.	Leisure	19 to 64 (and 16-30 youth project)	Combination of 1-3 localities
Coping Through Football (Exercise to Happiness)	Greystone Rovers Foundation and NHS Dumfries and Galloway	A football programme ran by Greystone Rovers encouraging adults with mental health conditions to engage in weekly exercise to improve their health and well being.	Health and Social Care	19 to 64	Nithsdale

Project Name	Lead Agency	Purpose	Project Type	Age	Location
Core Paths Programme	Dumfries and Galloway Council	Core paths are key public access routes identified region-wide. Core paths are maintained to a reasonable condition and signposted.	Urban design and natural environment	Intergenerational	Regional
Council Staff Cycle To Work Scheme	Dumfries and Galloway Council	The Local Authority can loan cycles and cycle equipment to staff as a tax free benefit through the Cycle to Work Scheme as a means of promoting healthy and sustainable journeys.	Transport	Intergenerational	Regional
Cycling Capital Programme	Dumfries and Galloway Council	A capital programme to increase cycling activity in Dumfries and Galloway by increasing the extent of specific cycle infrastructure	Urban design and natural environment	Intergenerational	Regional
Cycling Club	Stepping Stanes Youth Cycle Club	Community Sports Club providing opportunities and competitions in cycling	Leisure	5 to 18	Nithsdale
Curriculum Physical Education	Dumfries and Galloway Council	Programme to fulfil the Scottish Government's commitment to 2hours/2 periods of Physical Education per week for every school pupil in recognition of the positive impact it has on pupils' health, educational attainment and life chances.	School and Education	3 to 18	Regional
Dumfries and Galloway Council Leisure Facility	Dumfries and Galloway Council	Local Authority operated Leisure Facility	Leisure	Intergenerational	Annandale & Eskdale
Easy Access	Dumfries and Galloway Council	A programme providing discounted access to council provided leisure activities for targeted groups (e.g. armed Forces & military vets, disability, unemployed, 60+ , students & carers)	Leisure	19+	Regional
Exercise Referral	Dumfries and Galloway Council	Exercise Referral is a specific / formalised programme whereby a health professional refers a patient to a fitness programme. To increase physical activity levels amongst sedentary clients in identified practices.	Health and Social Care	19+	Annandale & Eskdale
Give Everybody Cycle Space Campaign	Cycling Scotland	A road safety awareness campaign designed to remind anyone driving how much space they should give people on bikes when overtaking – at least as much space as you give a car. It aims to create high levels of driver awareness around people on bikes to make Scotland's roads more cycle friendly.	Mass Media	Intergenerational	Annandale & Eskdale
Go4it Programme	NHS Dumfries and Galloway	Programme offering children, young people and their families sessions to support maintaining a healthy weight.	Health and Social Care	5 to 18	Nithsdale
Healthy Connections Lifestyle Clinics (Social Prescribing)	NHS Dumfries and Galloway	A single point referral for GPs and Allied Health Professionals which links individuals to various opportunities in the local area, as a way of helping people to feel more connected within the community and to improve wellbeing.	Health and Social Care	19+	Nithsdale
Health Walk Programme - Better for Walking	Better for Walking	The Better 4 Walking in Annandale and Eskdale Project has weekly walks in Moffat, Lockerbie, Lochmaben and Gretna. The group aims to increase the awareness of the benefits of being physically active as well as encourage more people to become active and stay active through walking.	Leisure	19+	Annandale & Eskdale
I Bike	Sustrans	A project working with schools to deliver practical solutions to two specific issues associated with cycling to school, the drop in cycling levels when children move from primary to secondary school and the gender gap that sees far fewer girls than boys cycling to school.	Transport	5 to 18	Combination of 1-3 localities
jogscotland	Dalbeattie Running Club	jogscotland provides fun, friendly jogging groups are perfect for people who want to get active for the first time, or more experienced runners who want to exercise in a sociable, supportive environment. No	Leisure	19+	Stewartry
Let's Get Sporty	Let's Get Sporty	"Let's Get Sporty Dumfries and Galloway, provide young people with training, mentoring and employment opportunities through the delivery of sport and physical activity." The programme aims to increase physical activity opportunities and provide young people with vocational experience/mentoring in coaching/ leadership	Sport	Intergenerational	Combination of 1-3 localities

Project Name	Lead Agency	Purpose	Project Type	Age	Location
Let's Motivate	Dumfries and Galloway Council	Let's Motivate is a free of charge programme designed to increase levels of physical activity and improve the health and wellbeing of adults and older adults across Dumfries and Galloway, including care homes.	Health and Social Care	65+	Regional
Looked After Children Leisure Card Scheme	Dumfries and Galloway Council	A programme providing free access to Local Authority leisure activities for Looked After Children and Young People and care leavers opportunities	Leisure	0 to 25	Regional
Outdoor Education (curricular)	Dumfries and Galloway Council	Local Authority outdoor adventure activities (curricular schools programme)	School and Education	5 to 18	Regional
Outdoor Education (non school)	Dumfries and Galloway Council	Local Authority commercial outdoor activity programme available to the public	Leisure	5+ (children and adults)	Regional
Out Patient Cardiac Rehab Service	NHS Dumfries and Galloway	A clinical service promoting physical activity and supporting health behaviour change and psychosocial adjustment post cardiac event	Health and Social Care	19+	Regional
Park Walk	NHS Dumfries and Galloway	A free weekly walk to support an increase in active living for youngsters who are overweight/ obese (and their families)	Leisure	0-64 (targeted at youngsters)	Nithsdale
Physical Activity Community Engagement (PACE)	University of the West of Scotland	The University of the West of Scotland in partnership with Public Health Dumfries and Galloway deliver a multi-level approach to physical activity promotion within the nursing curriculum. "Physical Activity Community Engagement" (PACE) was developed to provide nursing students with the knowledge, skills and confidence to engage and facilitate health behaviour in physical activity promotion across a range of community settings.	School and Education	Intergenerational	Regional
Physical Exercise Champions Programme (PEC's)	University of the West of Scotland	The PEC's are student nurse ambassadors who are provided with support to promote the health benefits and provide opportunities to other students towards being more physically active	School and Education	19+	Regional
Play@home	NHS Health Scotland	"The play@home is a national programme which includes a set of books on different developmental levels (baby to preschool). These books contain activities to support babies' development and improve the mental wellbeing of parents and children from birth".	Health and Social Care	Under 5 (and families)	Regional
Pre-School Swimming and Pre-School Gymnastics	Dumfries and Galloway Council	Local Authority Sport Development programmes for pre-school children.	Leisure	Under 5	Nithsdale
School Sport Competition	sportscotland / Dumfries and Galloway Council	Programme providing opportunities for pupils to compete in structured competitions in various sports.	School and Education	5 to 18	Regional
Social Prescribing	NHS Dumfries and Galloway	A single point referral for GPs and Allied Health Professionals which links individuals to various opportunities in the local area, as a way of helping people to feel more connected within the community and to improve wellbeing.	Health and Social Care	Intergenerational	Stewartry
Sport Club programme	Annan & District Athletic Club	Community Sports Club providing opportunities and competitions in athletics	Sport	5+	Annapdale & Eskdale
Sport Club programme	Annan Tennis Club	A community sports club providing tennis programmes for all ages and abilities	Sport	Intergenerational	Annapdale & Eskdale
Sport Club programme	Dryfesdale Curling Club	Community Sports Club providing opportunities and competitions in curling	Sport	5+	Annapdale & Eskdale
Sport Club programme	Dumfries Blues	Community Sports Club providing women and girls opportunities and competitions in netball	Sport	Intergenerational	Nithsdale
Step Count Challenge (Pedometer)	NHS Dumfries and Galloway and Dumfries and Galloway Council	A virtual workplace challenge system encouraging individuals/teams to walk more as part of their everyday routine	Workplace	19 to 64	Nithsdale
Weight Management Programme	NHS Dumfries and Galloway / Let Get Sporty	An NHS Dietitian led Weight Management Service providing a physical activity programme. The physical input delivered by Lets Get Sporty.	Health and Social Care	19+	Regional
7 Stanes Trail Maintenance	Forestry Commission Scotland	Maintenance of 7 Stanes mountain bike trails	Urban design and natural environment	Intergenerational	Regional

Types of Physical Activity Promotion in Dumfries and Galloway

The World Health Organisation (WHO) has described 7 types of physical activity project that are known to be effective in raising levels of physical activity. These are outlined in the 2012 publication *Investments that Work for Physical Activity*⁸. Using this framework as a guide, we have mapped the projects and being implemented in Dumfries and Galloway against these promotion types (with some small contextual modifications of the definitions, and a new category 'Workplace' added). The results are displayed in table 2.

Table 2. Types of PA promotion in Dumfries and Galloway

Project type	Number of projects
School and Education	8
Transport	4
Urban design, Infrastructure and Natural Environment	6
Health and Social Care	9
Mass Media	1
Sport	5
Leisure	17
Workplace	2

Although several of the evaluated schemes appeared in multiple 'project type' categories, for simplicity each of the 52 schemes was placed only in the primary 'project type' to which they correspond (e.g. the Beat the Street Scheme could be placed in both 'Urban design' and 'Transport', but for the purposes of this report has been placed only in 'Urban design' as the overall best fit).

The most common setting for the physical activity promotion was 'Leisure' (n=17 representing 34% of all included projects). There were 8 schemes placed in 'School and Education' and 8 in 'Health and Social Care'. 'Urban design, Infrastructure and Natural Environment', 'Transport', 'Workplace' and 'Sport' had between 2-5 projects, and there was only one example of 'Mass media' physical activity promotion in Dumfries and Galloway.

This overall picture should be considered a success in Dumfries and Galloway. At least one project has been achieved in the period 2015-16 in each of the key areas, and this reflects the broad ranging work that has been delivered by the strategic partnership. The apparent bias to Leisure might reflect the existing facilities and workforce in Dumfries and Galloway, or the relatively easier process of conducting evaluation compared to, for example transport infrastructure. Likewise, for schools and health and social care projects.

Recommendation 2: Establish a project monitoring system across the entire Dumfries and Galloway Region, to better understand the types of project being delivered. This will highlight potential areas for focus or sustainability.



Physical Activity Promotion in Dumfries and Galloway by age and gender

In terms of age there were n=14 projects focussing on children and adolescents (5-18 years), n=15 for adults (19+ years), and n=16 for multiple age groups (identified as intergenerational). This represents excellent spread and provision for ages 5-64 years. These data are shown in table 3.

Table 3. Types of PA promotion in Dumfries and Galloway

Project age	Number of projects
Under 5 years	3
Children and adolescents (generally 5-18 years)	14
Adults (generally 19-64 years)	15
Intergenerational (all ages)	18
Older adults (65+ years)	2

In contrast, there were just n=3 projects for those under 5 years and n=2 for older adults (65+). This represents a clear area for focus for Dumfries and Galloway in the coming years. Especially given the local context; Dumfries and Galloway has a growing older adult population, above the national average and this is a major challenge for Health and Social Care Integration. Persons aged 60 and over make up 31.1% Dumfries and Galloway population (National average = 24%) according to the National Records for Scotland, 2015⁹. The over-65s population is likely to grow by 21% by 2020 /46% by 2035¹⁰.

Recommendation 3: We recommend a renewed focus on for provision of physical activity promotion that is contextually relevant in older adults (65 years and older).

Recommendation 4: We recommend a renewed focus on for provision of physical activity promotion that is contextually relevant in early years (under 5s).

In terms of gender 48 of the 52 projects (96%) were open to all, with one project for females and one for males. Of the 52 projects open to all, 2 had a female only component, and 3 had a specific aim to target and recruit females. This suggests that Dumfries and Galloway has an equitable gender focus, while acknowledging that specific approaches and targeted recruitment may be required. From the available data there is no information on approaches for disability groups.

⁹ National Records for Scotland. (2015). Dumfries & Galloway Council Area - Demographic Factsheet. National Records for Scotland. Available from: <http://www.nrscotland.gov.uk/files/statistics/council-area-data-sheets/dumfries-and-galloway-factsheet.pdf>

¹⁰ National Records of Scotland. (2011). Census: Aggregate data (Scotland). UK Data Service Census Support. Available from: <http://www.scotlandscensus.gov.uk/>

Principle Findings – Best Investments for Physical Activity in Dumfries and Galloway

In the following section we attempt to highlight the projects that have offered the best return on investment in Dumfries and Galloway, based on the evaluation data available. In line with goal of the strategic partnership to deliver a broad range of physical activity promotion we have presented the best investments within each of the project types (see table 2).

School and Education

Of the schools based approaches, offering opportunities and infrastructure for a range of sports and games before during and after school for 5-18 year olds appeared to offer the best return on investment as demonstrated by the [Active Schools – Annual Programme] and [The Schools Sport Competition]. While these approaches can be expensive to setup and run, their extensive reach in terms of sessions, and age groups catered for resulted in excellent returns.

It should be noted that [Bikeability] and [Outdoor Education] Projects offered good return on investment as well. An evaluation into the impact of Bikeability training on long term cycling behaviours could be considered beneficial. From the evaluation data these projects had lower reach, but were also less expensive to run and might be considered candidates for scalability.

Recommendation 5: Continue school based provision of access and opportunity. Seek to build sustainability and conduct assessment of equality of access. Conduct process evaluation aimed at delivery improvements.

Recommendation 6: Assess school based projects with potential for scale-up

Transport

Within Transport there was only evaluation data on reach, which was a function of both the nature of the project and the quality of evaluation data available.

The [Active Travel Maps] project provided active travel information for over 20,000 households which represents a good return on the investment in terms of reach. However, data are now needed on how many people used this information resource. Likewise the [iBike] project reached those aged 5-18 years in Dumfries and Galloway in good numbers compared to the cost, but to fully understand the return on investment, the number of those who started cycling (or reliable estimates) is critical.

Recommendation 7: Evaluate existing transport projects for impact beyond reach, to understand the return on investment they may offering



Urban Design, Infrastructure and Natural Environment

Of the Urban Design, Infrastructure and Natural Environment projects [Beat the Street Annan] and [Beat the Street Dalbeattie] represented good return on investment. These projects attempts to encourage and normalise walking and cycling in the local area. While they require considerable investment, the evaluation data indicates impressive reach and crucially repeat use over the duration of the project leads to high physical activity detected through active travel journeys.

The [Health Dalbeattie - Core Path 20] is a coastal path development project also worthy of note. While it is relatively high cost, and does not have usage rates comparable to the Beat the Street projects it is the ongoing legacy of this type of infrastructure that may offer good returns on investment. Once in place, and assuming reasonable maintenance costs, infrastructure like this could have an effect for 5, 10 or 20 years [>20 dependant on future circumstances], which would clearly improve return on investment values dramatically.

Recommendation 8: Existing projects have promising evaluation data for impact and cost-effectiveness. We recommend evaluation of longer term impacts to understand the scale at which these projects should be promoted, and their potential in terms of sustainability.

Recommendation 9: We recommend a strategic focus on lasting urban and natural infrastructure and successful place making with legacy potential. Particularly those projects which could benefit all in society. This may require long sighted projections and evaluations to assess the true value.

Health and Social Care

Health and Social Care is a particularly varied and complex context, where it may not be appropriate to directly compare projects, especially those that provide for at risk or vulnerable populations. Likewise the cost can be hard to reliably assess when projects are embedded within existing healthcare infrastructure and staffing. If certain services are routinely delivered anyway, it is difficult to place a cost on additional physical activity delivery.

With these considerations in mind, based on their reported costs and reach the [Healthy connections lifestyle clinics] (for adults) and [Let's Motivate] (for older adults) projects appear to be particularly good investments. The [Play@home] project provides resources for those aged 0-4 years and the [Go4it club] is a weight management project for overweight individuals. These were also considered good investments and together cover all ages.

In the context of a health care setting the [Out Patient Cardiac Rehab] project, the [Exercise referral] project and the [Coping Through Football] project (for young adults with psychosis) should be considered good investments when compared to the costs of pharmacological or health care specialist alternatives.

Recommendation 10: Physical activity promotion within primary and secondary healthcare should be considered a priority in Dumfries and Galloway. It is a reasonable assumption that any provision is cost-effective in the context of healthcare costs for treating chronic disease.

Recommendation 11: Physical activity should be considered a vital sign across primary and secondary care. The Physical Activity Pathway should be prioritised to support delivery and assessment, brief advice, and brief intervention by a range of healthcare professionals¹¹.

¹¹ NHS Health Scotland. (2013). NHS Physical Activity Pathway Quick Reference Guide

Mass Media

Within Mass Media there was just the [Give everybody cycle space campaign]. It should be considered a success that it exists, but more detailed evaluation data are required to understand if it can be considered a good investment.

Recommendation 12: At a strategic level, Dumfries and Galloway should decide if mass media is a regional focus, or a national focus, and the role the region should play. This may be related to any social media strategies.

Sport

Based on high overall attendance the [Let's get sporty] project offered good return on investment. The [Dumfries Blues Netball Club] and the [Annan Tennis club programmes] were both notable projects. While the number of unique participants was relatively low, the number of repeat attendances by these participants was very high, suggesting a high impact on individuals involved. In turn this represents very good return on investment.

The [Athletics] and [Curling] projects were much smaller in terms of cost and reach, but the return on investment they offer suggest they may be good candidates for scale up.

Recommendation 13: Physical activity promotion through sport appears to offer high engagement that is also cost effective. It is critical that the equality of access and participation is evaluated and assessed to ensure that individuals from across the social spectrum can enjoy the benefits.

Recommendation 14: There may be small scale projects that could be scaled up for excellent return on investment. This needs local and contextual appraisal.

Leisure

This was the largest category in terms of number of projects. Interestingly, they were also largely comparable in terms of appraisal of return on investment.

Considering reach and attendance, the [Easy Access], [Pre-school swimming and pre-school gymnastics], and [Dumfries and Galloway Council Leisure Facility] projects were successful with over 10,000 attendances, but as may be expected were relatively more expensive. The [Be Active Upper Nithsdale], [Building Healthy Communities Machars], [Building Healthy Communities West Wigtownshire], [Building Healthy Communities Tai Chi for Health and Wellbeing], and [Health Walk Programme - Better for Walking] projects had reach or attendance of 1,000-10,000 and were relatively less costly to run. The [Babes in the woods], [Outdoor education] (non-school for children and adults), [Chair based exercise], [Park Walk], and [Challenge to change programme] projects had reach or attendance of 100-1,000 and were the least costly. They also catered for a wide range of age groups.

Finally it is worth noting the [Annan Swimming Pool] which was an expensive piece of community infrastructure, but one with the potential for legacy and long term impact.

Recommendation 15: Dumfries and Galloway has a strong profile in terms of leisure provision. Evaluation is required focussing on project improvement, quality of delivery and equality of access.



Workplace

In the workplace, the [Big Team Challenge] project, a pedometer based intervention, demonstrated good reach and return on investment. The current evidence suggests these are an effective and cost-effective approach to increasing physical activity in workplace environments.

Recommendation 16: The workplace is increasing an inactive environment that promotes sedentary behaviour. Dumfries and Galloway requires more workplace physical activity promotion projects. Pedometer based workplace challenges may be an effective option.



Further Recommendations for Practice and Evaluation

Based on the evaluation findings, it is clear that Dumfries and Galloway HWB is a leading organisation in terms of regional evaluation of physical activity promotion. The requirement for projects to self-evaluate is providing critical information on successes, and areas for development, and is also likely to be helping individual projects self-improve. It is only through these efforts that existing successes and areas for improvement can be identified.

We make the following evaluation recommendations to build on the existing good practice.

Recommendation 17: The data collection tool for this work was built from the Standard Evaluation Framework¹², which is very good practice. This report identified further information that will be required for future work. This should be developed in collaboration with the end users (e.g. Project Managers) to ensure fitness for purpose. Priority areas include how to assess equality of access, comparable cost data, and comparable usage, attendance or reach information.

It also needs to consider projects with legacy potential, and be able to identify small scale projects that could be scaled up for excellent return on investment. This includes appraisal of local and contextual factors.



Strengths

This report has a number of strengths that add confidence to the findings:

1. The report captured >50 projects from each of the WHO Best Investment areas.
2. There was a good range of projects captured from across Dumfries and Galloway. Projects of various scale and sizes were included.
3. Despite some methodological challenges, a number of projects that offered return on investment were identified. These included projects in the public and third sector.
4. There are some examples of projects in Dumfries and Galloway that appeared cost effective while contributing to positive health behaviour change outcomes
5. A total of 17 recommendations were identified which will support future policy, practice and evaluation approaches if implemented. Lack of provision to some key demographic grouping was identified and should focus future decision making.

Limitations

Similarly, there are some considerations that should be taken into account when interpreting these findings:

1. Despite a large numbers of projects captured within the report, from each of the investment categories, this work did not capture all PA delivered in Dumfries and Galloway.
2. A lack of consistency in data collection measures and approaches meant that it was not possible to compare interventions directly across (and in some cases within) the different investment categories.
3. There is a paucity of pre-post data to evidence direct behaviour change impact of interventions on supporting the inactive to become active.

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List of Recommendations

Number	Recommendation	Investment/ Promotion Area
1	Establish a project monitoring system across the entire Dumfries and Galloway Region, to better understand the geographical spread.	Demographic Location
2	Establish a project monitoring system across the entire Dumfries and Galloway Region, to better understand the types of project being delivered. This will highlight potential areas for focus or sustainability.	Type of Physical Activity
3	We recommend a renewed focus on for provision of physical activity promotion that is contextually relevant in older adults (65 years and older).	Age and Gender
4	We recommend a renewed focus on for provision of physical activity promotion that is contextually relevant in early years (under 5s).	Age and Gender
5	Continue school based provision of access and opportunity. Seek to build sustainability and conduct assessment of equality of access. Conduct process evaluation aimed at delivery improvements.	School and Education
6	Assess school based projects with potential for scale up	School and Education
7	Evaluate existing transport projects for impact beyond reach, to understand the return on investment they may offering.	Transport
8	Existing projects have promising evaluation data for impact and cost-effectiveness. We recommend evaluation of longer term impacts to understand the scale at which these projects should be promoted, and their potential in terms of sustainability.	Urban design, Infrastructure and Natural Environment
9	We recommend a strategic focus on lasting urban and natural infrastructure and successful place making with legacy potential. Particularly those project which could benefit all in society. This may require long sighted projections and evaluations to assess the true value.	Urban design, Infrastructure and Natural Environment
10	Physical activity promotion within primary and secondary healthcare should be considered a priority in Dumfries and Galloway. It is a reasonable assumption that any provision is cost-effective in the context of healthcare costs for treating chronic disease. be considered.	Health and Social Care

Number	Recommendation	Investment/ Promotion Area
11	Physical activity should be considered a vital sign across primary and secondary care. The use of the Scottish Physical Activity Screening Questionnaire (Scot-PASQ) for consistent monitoring of trends across the region should also be considered.	Health and Social Care
12	At a strategic level, Dumfries and Galloway should decide if mass media is a regional focus, or a national focus, and the role the region should play. This may be related to any social media strategies.	Mass Media
13	Physical activity promotion through sport appears to offer high cost effective engagement. It is critical that the equality of access and participation is evaluated and assessed to ensure that individuals from across the social spectrum can enjoy the benefits.	Sport
14	There may be small scale projects that could be scaled up for excellent return on investment. This needs local and contextual appraisal.	Sport
15	Dumfries and Galloway has a strong profile in terms of leisure provision. Evaluation is required focussing on project improvement, quality of delivery and equality of access.	Leisure
16	The workplace is increasing an inactive environment that promotes sedentary behaviour. Dumfries and Galloway requires more workplace physical activity promotion projects. Pedometer based workplace challenges may be an effective option.	Workplace
17	The data collection tool for this work was built from the Standard Evaluation Framework, which is very good practice. This report identified further information that will be required for future work. This should be developed in collaboration with the end users (e.g. Project Managers) to ensure fitness for purpose. Priority areas include how to assess equality of access, comparable cost data, and comparable usage, attendance or reach information.	Practice and Evaluation

Thank you to all organisations and services who submitted information for this report.



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Dumfries and Galloway Physical Activity Alliance